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09/346,884

07/02/1999

NIRAT BHUPESH SHAH

14013-23

3005

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01/08/2007

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EXAMINER

LY, ANH VU H

ART UNIT

PAPER NUMBER

2616

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/346,884             | SHAH, NIRAT BHUPESH |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Anh-Vu H. Ly           | 2616                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 1,5,7-11 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This communication is in response to applicant's amendment filed October 19, 2006.  
Claims 1-13 and 17-19 are pending.

### ***Claim Objections***

2. Claims 1, 5, 7-11, and 13 are objected to because of the following informalities:

With respect to claim 1, in lines 2, 5, 9, and 14, delete "enabled" and "may be" because the recitation "enabled" or "may be" is not a positive limitation but only requires the ability to so perform. Therefore, it does not limit a claim to a particular structure and does not limit the scope of a claim or claim limitation. Further, in line 10, replace "the remote device" with --the remotely-located device--.

With respect to claims 5, 7, and 11, in line 2, delete "enabled" because the recitation "enabled" is not a positive limitation but only requires the ability to so perform. Therefore, it does not limit a claim to a particular structure and does not limit the scope of a claim or claim limitation.

With respect to claim 8, in line 1, replace "in claim 5" with --in claim 7-- since claim 7 recites detecting higher bandwidth. Further, in line 1, delete "enabled" because the recitation "enabled" is not a positive limitation but only requires the ability to so perform. Therefore, it does not limit a claim to a particular structure and does not limit the scope of a claim or claim limitation.

With respect to claim 9, in line 2, delete "enabled" because the recitation "enabled" is not a positive limitation but only requires the ability to so perform. Therefore, it does not limit a

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claim to a particular structure and does not limit the scope of a claim or claim limitation.

Further, in line 2, replace "the voice information" with --voice information--.

With respect to claims 10 and 13, in line 2, replace "the voice information" with --voice information--. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-13 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vargo et al (US Patent No. 6,356,545) in view of Riddle (US Patent No. 6,175,856) further in view of Knappe (US Patent No. 6,785,267 B1). Hereinafter, referred to as Vargo, Riddle, and Knappe.

With respect to claims 1 and 17, Vargo discloses a device comprising a DSP module enabled to receive an analog telephone signal to convert the analog telephone signal to a digital telephone signal and further to packetize the digital telephone signal for transmission to a remotely-located device (Fig. 1 illustrates an operation of the Internet telephone system. Therefore, placing a call over the Internet, first of all, the received analog signal from the call initiator must be digitized and packetized into packets, performed by a processor or DSP, before transmitting to the remotely located device).

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Vargo does not disclose that the device and the remotely located device enabled to negotiate a first type of codec by each sending to the other a list of one or more types of codecs that each supports and each deciding to use a mutually supported codec through the use of a predetermined protocol. Riddle discloses that the computer readable media 601 also includes sending code 608 which may be used by the sending system to send information regarding the decompression capabilities of the sender system when the sender system also functions as a receiver of compressed data which needs to be decompressed (col. 18, lines 48-56). Further, Riddle discloses in Figs. 1 and 2, a system for supporting teleconference between plurality of workstations and routers connecting different networks. Such system is implemented by a specific protocol therefore the step of exchanging information is also carried out by using such specific protocol. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the features of exchanging list of codecs between the sender and the receiver and selecting a best codec from the lists of exchanged codecs in Vargo's system, as suggested by Riddle, to maximize transmission efficiency.

Vargo does not disclose that during communications between the remotely-located device and the DSP module, the DSP module enabled to renegotiate a second type of codec, wherein the renegotiation is triggered upon detection of degradation in voice quality by the remote device and the DSP module to dynamically switch to the second codec only if the device determines that the second codec is available therein and wherein, the type of codec being utilized may be repeatedly, mutually, renegotiated to dynamically change compression techniques and switching between the codecs is performed during a call. Knappe discloses that when the audio quality selector 86 detects a request by the opposite end for audio quality reconfiguration that affects the

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codec used by digital signal processor 90. The renegotiator examines whether the current codec provides the requested audio quality. If it does not, the renegotiator can attempt to renegotiate an appropriate codec with its opposite endpoint. Preferably, the renegotiator relies on a codec “preference list” that matches the requested audio quality (col. 5, lines 38-65). Herein, the switching between the codecs is performed during a call.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the features of having the source and the destination, repeatedly, mutually, renegotiated for the new type of codec in response to the network conditions in Vargo’s system, as suggested by Knappe, to accommodate QoS for a call and effectively manage the bandwidth of a packet telephony system.

With respect to claims 2-4, Vargo, Riddle, and Knappe have addressed all the limitations as recited in the independent claim 1. Vargo does not disclose that wherein switching between the codes is initiated by a user of one of the telephone devices; a predetermined code is assigned to each codec, the user specifies the type of codec to be switched to by entering the predetermined code corresponding to a desired codec and predetermined code is programmably-alterable. However, switching initiated by a user and predetermined code are well known in the art such a TV remote controller, wherein a user can select different channels to view and wherein the remote controller can be programmed to store a number of channels with associated “hot keys”. Wherein, each “hot key” is corresponded with a channel and a user can press that “hot key” to turn to that specific channel. User can re-program the remote controller to different “hot keys” associated with different channels at another time. It would have been obvious to one

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having ordinary skill in the art at the time the invention was made to include a method of user initiating and assigned predetermined code, which is re-programmable, for each codec in Vargo's system, to increase system's functionalities.

With respect to claims 5-8, Vargo discloses that the device enabled to switch from a codec resulting in the use of larger packet sizes to a codec resulting in smaller packet sizes in response to detecting a lower available bandwidth on a packet switching network and vice versa (col. 11, lines 18-22 discloses that voice port 61 responds to changing network conditions to maintain speech quality, it is possible to vary the size of the individual packets or to vary the bundling-of the packets by techniques that are well known in the art. This implies that larger sized packets are reduced to smaller sized packets when low in bandwidth and vice versa).

With respect to claim 9, Vargo discloses that remotely-located device is enabled to detect the degradation in the quality of the voice information (the voice port adjusts by selecting the Voxware 2.9kbits/sec algorithm having somewhat lower sound quality, but with two level redundancy error correction after noticing dropped packets, herein, detecting the degradation in the quality of voice information, as disclosed in col. 10, lines 46-67 and Fig. 11a).

With respect to claim 10, Vargo discloses wherein the degradation in the quality of the voice information is due to loss of one or more packets (after noticing dropped packets, e.g., loss of one or more packets, the voice port adjusts by selecting the Voxware 2.9kbits/sec algorithm

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having somewhat lower sound quality, but with two level redundancy error correction, as disclosed in col. 10, lines 46-67 and Fig. 11a).

With respect to claim 11, Vargo discloses wherein a threshold defines the number of lost packets that are tolerated and the device is enabled to trigger a decision to switch to the second type of codec (after noticing dropped packets, the voice port adjusts by selecting the Voxware 2.9kbits/sec algorithm having somewhat lower sound quality, but with two level redundancy error correction, as disclosed in col. 10, lines 46-67 and Fig. 11a. Herein, the threshold defines the number of lost packets).

With respect to claim 12, Vargo discloses that wherein a plurality of packets form a message and each packet includes a sequence number indicative of the position of the packet with respect to other packets in the same message, the sequence numbers of the same message being in sequential order (a stream of voice data 200 includes a plurality of data packets numbered 1 through 10, where each packet further contains a plurality of data bytes indicated by the letters in Fig. 8a to 8d). Vargo discloses that wherein a loss of packets is detected when one or more sequence numbers are missing from the received packets of the same message (after noticing dropped packets, herein, packets are not received in sequential order, the voice port adjusts by selecting the Voxware 2.9kbits/sec algorithm having somewhat lower sound quality, but with two level redundancy error correction, as disclosed in col. 10, lines 46-67 and Fig. 11a).



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With respect to claim 13, Vargo discloses that wherein the degradation in the quality of the voice information is due to an intolerable delay associated with the time for a packet to travel between the device and the remotely-located device (since Internet is built to transfer data packets rather than continuous streams of sound, there may be delays and losses and the voice port 61 responds to changing network conditions, as disclosed in col. 1, lines 40-43).

With respect to claim 18, Vargo discloses that the codec negotiation is performed pursuant to H.245 protocol (Fig. 1 discloses Internet telephone systems; wherein, H.245 protocol is known for exchanging signaling messages).

With respect to claim 19, Vargo discloses that the first type of codec includes a compression/decompression algorithm defined by any one of the standards: G.711, G.726, G.729, or G723.1 (assuming the voice port begins with the commercially available TrueSpeech codec algorithm, which encodes speech at 8.5kbits/sec and with no redundancy, as disclosed in col. 10, lines 46-67 and Fig. 11a). Vargo discloses that second type of codec utilizes a compression/decompression algorithm defined by any one of the standards: G.711, G.726, G.729, or G723.1 (after noticing dropped packets, the voice port adjusts by selecting the Voxware 2.9kbits/sec algorithm having somewhat lower sound quality but with two level redundancy error correction, as disclosed in col. 10, lines 46-67 and Fig. 11a).

*Response to Arguments*

4. Applicant's arguments with respect to claims 1-13 and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

avl

  
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SUPERVISORY PATENT EXAMINER 1/4/07